



DW

Docket No.: 55071-283

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of : Customer Number: 20277  
Doug Van Den BROEKE, et al. : Confirmation Number: 4766  
Serial No.: 10/659,715 : Group Art Unit: 2878  
Filed: September 11, 2003 : Examiner:  
:

For: METHOD OF ACHIEVING CD LINEARITY CONTROL FOR FULL-CHIP CPL  
MANUFACTURING

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop IDS  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In accordance with the provisions of 37 C.F.R. 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the documents listed on the attached form PTO-1449. It is respectfully requested that the documents be expressly considered during the prosecution of this application, and that the documents be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is being filed within three months of the U.S. filing date OR before the mailing date of a first Office Action on the merits. No certification or fee is required.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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INFORMATION DISCLOSURE CITATION IN AN APPLICATION  (PTO-1449)			ATTY. DOCKET NO. <b>55071-283</b>	SERIAL NO. <b>10/659,715</b>
			APPLICANT <b>Doug Van Den BROEKE, et al.</b>	
			FILING DATE <b>September 11, 2003</b>	GROUP <b>2878</b>

U.S. PATENT DOCUMENTS					
EXAMINER'S INITIALS	CITE NO.	Document Number Number-Kind Code <sub>2</sub> ( <i>if known</i> )	Publication Date MM- DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	US	6,541,167 B2	04/01/2003	Petersen et al.	
	US	6,482,555 B2	11/19/2002	Chen et al.	
	US	6,114,071	09/05/2000	Chen et al.	
	US	6,623,895 B2	09/23/2003	Chen et al.	
	US	5,302,477	04/12/1994	Dao et al.	
	US	5,840,448	11/24/1998	Borodovsky et al.	
	US	5,633,102	05/27/1997	Toh et al.	
	US	5,354,632	10/11/1994	Dao et al.	
	US	5,348,826	09/20/1994	Dao et al.	
	US	5,384,219	01/24/1995	Dao et al.	
	US	5,618,643	04/08/1997	Dao et al.	
	US	6,641,959	11/4/2003	Yan	
	US	6,562,522 B1	05/13/2003	Yan	
	US	6,660,649 B2	12/09/2003	Dao et al.	
	US	6,458,495 B1	10/01/2002	Tsai et al.	
	US	6,660,649 B2	12/09/2003	Dao et al.	
	US	5,424,154	06/13/1995	Borodovsky	
	US	5,935,733	08/10/1999	Scott et al.	

## FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	CITE NO.	Foreign Patent Document Country Code <sub>3</sub> -Number 4-Kind Codes ( <i>if known</i> )	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines Where Relevant Figures Appear	Translation	
						Yes	No

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER'S INITIALS	CITE NO.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	
		— WATANABE, Hisashi., et al. " Sub-quarter-micron gate pattern fabrication using a transparent phase shifting mask." J. Vac. Sci. Technol. B 9 (6) Nov/Dec 1991, pp.3172-3175	
		WATANABE, H., et al. " Transparent Phase Shifting Mask." Electron Devices Meeting, 1990, Technical Digest., International, IEDM 90-821 to 90-824, pp. 33.2.1 to 33.2.4	
		LEVENSON, Marc D., et al. " SCAA mask exposures and Phase First design for 110nm and below." Optical Microlithography XIV, Proceedings of SPIE Vol. 4346 (2001), pp. 817-826	
		KENNY, K.H. Toh., et al. " Optical Lithography and Chromeless Phase-Shifted Masks." SPIE Volume 1463, Optical/Laser Microlithography IV (1991) pp. 74-86	
		LEVENSON, Marc D., et al " Improving Resolution in Photolithography with a Phase-Shifting Mask." IEEE Transactions on Electron Devices, Vol. Ed-29, No. 12, December 1982, pp. 1828-1836.	
		ERDELY, Miklos., et al. " Enhanced Microlithography Using Phase Shifting and Off-axis Illumination." Jpn. J. Appl. Phys. Volume 34, (1995) Pt. 2, No. 12A, pp. 1629-1631	
		MATSUSO, Takahiro., et al. " Feasibility Study of an Embedded Transparent Phase-Shifting Mask in ArF Lithography." Optical Microlithography XIII, Proceedings of SPIE, Volume 4000 (2000), pp. 443-451	
		HSU, Chungwei., et al. " Patterning 0.1 um device by using hybrid PSM." Optical Microlithography XIV, Proceedings of SPIE, Volume 4346 (2001), pp. 441-451	

EXAMINER

DATE CONSIDERED

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.